

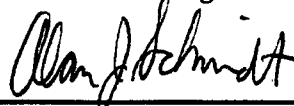
**WORKPLAN TO IMPLEMENT
FURTHER INVESTIGATIVE AND REMEDIAL ACTION
AT
MW19/HOT SPOT 1; HOT SPOT B AND C; AND HOT SPOT 4**

**L.E. CARPENTER AND COMPANY
WHARTON, NEW JERSEY**

November, 1998



Nicholas J. Clevett
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Project manager



RESIDUALS MANAGEMENT TECHNOLOGY, INC.

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Section 1

Introduction

L.E. Carpenter and Company (LEC) is pleased to submit this workplan to address the requirements outlined in the New Jersey Department of Environmental Protection (NJDEP) response letters dated January 20, 1998 and July 15, 1998 regarding investigative and remedial actions required at the LEC site in Wharton, New Jersey. This workplan has been prepared to comply with Paragraph 30 of the *Administrative Consent Order* (ACO) dated September 26, 1986. Additionally, all investigative and remedial actions proposed in this workplan will comply with the *Workplan for Phase I ROD Implementation* dated October, 1994; the *Record of Decision* (ROD) dated April 1994; the *Quality Assurance Project Plan* (QAPP) dated October, 1994; the *Remedial Action Workplan* (RAP) and *Site Health and Safety Plan* (HASP). All field activities will be performed in compliance with the NJDEP's Guidance Documents, *Field Sampling Procedures Manual* (1992), *Alternate Groundwater Sampling Techniques* (1994) and *Technical Requirements for Site Remediation* (N.J.A.C 7:26E-2.1).

As outlined in the NJDEP's response letters, specific issues pertaining to four (4) areas of concern require further action. Listed below are the four areas of concern ("Hot Spots"), and a brief description of the proposed action to address the concerns specific to each area:

- **MW-19/Hot Spot 1** - Install three (3) additional monitoring wells down gradient of the existing contaminant plume to further define the extent of groundwater contamination and establish a "clean zone" per the Technical Requirements for Site Remediation, N.J.A.C 7:26E-4.4. Once the extent of contamination has been determined, remedial options will be evaluated.
- **Hot Spots B and C** - Initiate additional subsurface investigation to further delineate the extent of lead contamination. Once the full vertical and lateral extent has been determined, alternative remedial options such as excavation or capping will be evaluated.
- **Hot Spot 4** - Based on the 1996 delineation, excavate the remaining soils (approximately 32 cubic yards) that exhibit concentrations of DEHP at or above the 100 milligram per kilogram (mg/kg) industrial/commercial clean-up standard. In turn, characterize the soils for transport and disposal at a NJDEP approved landfill.



Section 2

Site Background

L.E. Carpenter has been conducting subsurface investigation and remedial action activities at their facility located at 170 North Main Street in Wharton, New Jersey (Figure 1), in accordance with the New Jersey Department of Environmental Protection (NJDEP) Amended Administrative Consent Order issued in 1986. Subsurface investigation and remedial action activities conducted at the facility since 1986 have included the advancement of soil borings, the installation of groundwater monitoring wells, soil/sediment and groundwater sampling and the active removal of free-phase product via monthly enhanced fluid recovery (EFR) events.

In April 1994, the NJDEP issued a Record of Decision (ROD) regarding the LEC site. The ROD summarized the results of the remedial investigation (RI), the baseline risk assessment, the remedial alternatives and feasibility study (FS), and presented the selected remedy. The ROD required the extraction of free-phase floating product, the remediation of groundwater and the excavation and disposal of soils from various areas of concern or "Hot Spots".

Certain "Hot Spot" areas have been addressed, however, there are several areas that still require further evaluation and/or corrective action. A site plan showing the locations of the Hot Spots addressed in this workplan is presented as Figure 2. This workplan will focus on addressing the following areas of concern:

- **MW-19/Hot Spot 1:** The Hot Spot 1 area is located immediately west of building 9, along the western property boundary. The groundwater in this area is impacted with bis (2-ethylhexyl) phthalate (DEHP) at concentrations above the New Jersey Groundwater Quality Standards (NJGQS) outlined in the ROD. The MW-19 area is also located immediately west of building 9, along the western property boundary. The groundwater in this area is impacted with volatile organic compound (VOCs). Concentrations of toluene, ethylbenzene and total xylenes have been detected at levels exceeding NJGQS. For the purposes of this report the Hot Spot 1 area and the MW-19 area will be referred to jointly due to their close proximity to each other.
- **Hot Spots B and C:** The Hot Spot B area is approximately 70 feet by 110 feet in surface area and is located immediately southwest of the former building 14 location, in the central/eastern section of the LEC site. Hot Spot C is approximately 50 feet by 90 feet in surface area and is located immediately southeast of the former building 14, adjacent to Hot Spot 4 in the central/eastern portion of the LEC site. Soils within the upper five feet

horizon of both Hot Spot B and C are impacted with lead at concentrations exceeding the 600 mg/kg site specific soil remediation goal outlined in the ROD.

- **Hot Spot 4:** Hot Spot 4 is approximately 45 feet by 25 feet in surface area and is located adjacent to Hot Spot C, southeast of the former building 14, in the central/eastern section of the LEC site. Approximately 32 cubic yards of soils impacted with DEHP were delineated and approved for excavation and disposal by the NJDEP in August of 1996 (Roy F. Weston, Inc. *Second Quarter Progress Report*, dated August 1996).



Section 3

Proposed Scope(s) of Work

Per the comments outlined in the NJDEP letters dated January 20, 1998 and July 15, 1998, and as additionally summarized in the letter dated October 13, 1998 (Appendix A), this section presents proposed investigation activities for of the three areas of concern ("Hot Spots").

3.1 MW-19/Hot Spot 1

The results of the most recent groundwater investigation (April 1998) demonstrated that the extent of on-site groundwater impact has been delineated. However, DEHP, toluene, total xylenes and ethylbenzene concentrations in the groundwater exist above NJGQS at two downgradient locations: monitoring wells MW-19-2 and MW-19-5. As these two down gradient locations are close to the LEC property line, the potential for off-site, northwesterly migration exists. An additional three (3) off-site monitoring wells will be installed to determine the extent of off-site impact. Access agreements with the Village of Wharton and/or private residences will be secured prior to the commencement of any off-site investigative activities. Copies of these access agreements and or right-of-way permits will be maintained on-site during the completion of all off-site activities.

3.1.1 Monitoring Well Installation

The lateral delineation at the MW-19/Hot Spot 1 area will include installation of three (3) downgradient monitoring wells. The monitoring wells will be installed using rotary air hammer drilling methods by a New Jersey licensed well driller. Monitoring well installation permits will be obtained and well installation reports will be submitted to NJDEP upon completion. All monitoring wells will be installed in accordance with procedures outlined in the NJDEP's *Field Sampling Procedures Manual*. Figure 3 shows the current locations of all site wells, while Figure 4 shows the proposed locations for the additional three monitoring wells.

Continuous split spoon sampling will be conducted to characterize geology and to determine appropriate well depth. Each well will be screened across the groundwater table. Monitoring wells will be constructed of 10-foot long 2-inch diameter PVC screen and riser pipe. A sand filter pack will be placed around the well screen and a 5-foot bentonite seal will be placed above the filter pack. The remaining boring annulus will be grouted with a cement bentonite grout according to NJDEP requirements. So not to

interfere with potential off-site traffic, the three wells will be flush mounted to existing grade with road-rated protective well casings and covers.

Drilling and sampling equipment will be decontaminated as described in the QAPP. The equipment will be decontaminated prior to and between sampling locations using a high-pressure washer. Sampling equipment will be decontaminated between samples using a soap and distilled water rinse.

The monitoring wells will be developed by pumping. Pumping will continue until non-turbid formation water is produced. All development and decontamination waters will be containerized, staged in an appropriate location and removed along with fluids extracted during monthly enhanced fluid recovery (EFR) events.

3.1.2 Monitoring Well Sampling

All monitoring wells will be sampled in accordance with procedures outlined in the NJDEP's *Field Sampling Procedures Manual*. The groundwater samples will be collected at least two weeks after the wells have been developed according to NJDEP requirements. Groundwater samples will be collected from the three proposed monitoring wells and six existing monitoring wells. The samples will be collected and analyzed for DEHP (U.S. EPA SW846 Method 625) and BETX (U.S. EPA SW846 Method 602) by Envirotech Research, Inc. a NJDEP certified laboratory.

Quality control samples will be collected per the QAPP, to include one field blank per day of sampling, one trip blank per shipment, and one duplicate sample (5 percent of the total number of samples collected) .

Soil samples will be collected from the soil borings and analyzed for certain key remedial design parameters such as permeability, porosity, bulk density and grain size. As the stratigraphy within the Hot Spot 1 area appears to be somewhat homogenous, the results from these design parameter analyses should be representative of both on- and off-site soils conditions.

3.1.3 Investigation Derived Wastes

Soil cuttings generated from the drilling process will be containerized in 55-gallon steel drums, labeled, and staged appropriately pending off site disposal. RMT will relocate the drums to L.E. Carpenter property. The soil will be characterized for disposal and disposed off site at an approved landfill.

The decontamination and monitoring well purge fluids will be contained in 55-gallon drums and disposed along with fluid removed during an EFR event.

3.1.4 Limited Groundwater Use Survey

A limited groundwater use survey will also be conducted to determine if residential private wells in this area are used for potable water. This information will be used to evaluate the potential for exposure to impacted groundwater.

3.1.5 Applicable Remedial Alternatives

Once the full extent of impact has been defined for the MW-19/Hot Spot 1 area, a detailed outline of the potential remedial alternatives applicable for this area will be submitted to the NJDEP for review. Upon selecting an acceptable remedial action, RMT will submit all appropriate documentation to the NJDEP for review and approval.

3.2 Hot Spots B and C

Investigation and comparison of on and off-site lead concentrations suggests that the option of continuing to proceed with evaluating background soil lead levels to determine if an argument can be made for an increased cleanup objective through an Explanation of Significant Difference (ESD) or no further action, does not appear to be viable. In retrospect, the extent of lead impacted soils at Hot Spots B and C has been partially delineated based on previous sampling results. Lead, however, still remains at levels above the 600 mg/kg non-residential cleanup objective to the north and east of Hot Spot B and to the north and west of Hot Spot C.

3.2.1 Hot Spot B and C - Delineation and Characterization

RMT proposes to further delineate the horizontal and vertical extent of impact at both hot spots utilizing pushprobe sampling procedures (Geoprobe® or similar) on a 20 foot by 20 foot grid. Samples will be collected to determine the vertical extent of impact at 2.5 feet below ground surface (bgs) and 5.0 feet bgs. Both Hot Spots B and C will be delineated to the 600 mg/kg non-residential clean-up objective outlined in the ROD. The sample collection depth may extent to 6.0 feet bgs if deemed necessary. RMT will select samples for analysis based on field observations and results of the previous sampling. Samples not selected for analysis will be archived pending results of the analysis of selected samples. It is anticipated one day of sampling will be conducted at each hot spot.

RMT estimates that ten samples will be submitted for lead analysis for each of the two hot spots (total of 20 samples). Of these twenty samples, three will be selected for Toxicity Characteristic Leaching Procedure (TCLP) analysis, based on the results of the total lead analysis, in order to evaluate disposal options. The samples will be analyzed for total lead (U.S. EPA SW846 Method 6010) and TCLP Lead (method 1311/6010) by Envirotech Research, Inc. a NJDEP certified laboratory.

Once the extent of lead impacted soils has been determined, excavation and capping options will be evaluated to determine which is most feasible and cost effective. If excavation and disposal is cost prohibitive because of soil volume, and/or pre-treatment requirements prior to landfilling (if it is determined to be hazardous for TCLP lead), then an evaluation of the capping option will be warranted. If capping is found to be a viable option, a streamlined Risk Exposure Assessment to evaluate exposure routes and potential risk (< 1 in 10,000 or $< 1 \times 10^{-4}$) would be submitted for NJDEP review. A feasibility assessment would also be submitted to ensure that the proposed cap design is appropriate for these areas. Items such as periodic flooding of the Rockaway River, erosion, and maintenance costs would be factored into the feasibility assessment.

3.2.2 Soils Treatability Study

If the results of the TCLP lead analyses indicates that a substantial volume of soil is characteristically hazardous such that disposal is prohibitively expensive, a treatability study may be conducted to determine if RMT's patented Metals Treatment Technology (MTT) is appropriate to reduce the concentration of lead to below TCLP levels prior to off-site disposal. RMT would perform a treatability study on a composite soil sample (selected from samples collected during pushprobe delineation). The treatability study will determine the feasibility of treatment and determine treatment chemical dosage requirements. If performed, the results of the treatability study along with a complete technical breakdown of MTT and its potential application at the LEC site would be submitted to the NJDEP for review.

3.3 Hot Spot 4

Hot Spot 4 is located southeast of former Building 14 in the central/eastern section of the property. The extent of DEHP impacted soils at Hot Spot 4 was determined during previous investigation (Roy F. Weston, Second Quarter Progress Report, dated August 1996). A summary of the historical results of soil sample analysis used to delineate this area is presented as Appendix B. As indicated in the NJDEP-approved workplan, there are an estimated 32 cubic

yards of soil containing DEHP at concentrations above the 100 mg/kg industrial/commercial clean-up objective.

3.3.1 Excavation and Management of DEHP Impacted Soils

Historical analytical results from the 2nd Quarter 1996 Progress Report have been used to determine the extent of impact at this area. The proposed excavation will extend laterally to the two historical delineation points (4-DEL-3 and 4-DEL-7) located on the southeast side of the proposed excavation (Figure 5). Subsequently, per item 3 of the NJDEP letter dated January 20, 1998, no post-excavation samples are required.

All soils will be placed in lined 20 yard roll-off boxes and covered to prevent saturation and run-off due to inclement weather. Engineering controls will be used as defined in the *Soil Erosion and Sediment Control Plan*, presented in the Roy F. Weston report entitled *Workplan for Phase I ROD Implementation*, dated October, 1994. The soils excavated from Hot Spot 4 will be characterized for appropriate disposal and disposed off-site at an approved landfill.

3.3.2 Restoration

Hot Spot 4 will be restored to its original condition with respect to topography, hydrology, and vegetation to the maximum extent feasible. The excavation will be backfilled with certified clean fill. The fill shall have a permeability equal to or less than that of the loam, at a minimum. The area will either be paved or revegetated based on field conditions.

3.4 Schedule

A schedule for implementation of this proposed workplan is presented as Appendix C. The schedule initiates after this workplan has been submitted to the NJDEP for review.

Appropriate allocations of time to perform the proposed scopes of work, and corresponding sub scopes specific to each of the three Hot Spots are identified as tasks. Additionally each Hot Spot has been allocated a finite block of time with regard to the completion of the entire scope of work proposed in this plan. Milestone dates indicate critical project turning points, such as NJDEP approvals on present and future workplans. This schedule, and adherence to the proposed time frames are based upon the following assumptions:

- NJDEP review times for all documents pertaining to present and future scopes of work as identified on this schedule are no longer than 30 days.
- The appropriate permits have been granted by December, 16, 1998 to perform the MW-19/Hot Spot 1 off-site investigation (right-of-way permits, Well Permits).

- The lag time between the development and sampling of the three proposed monitoring wells is two weeks.
- Installation of the three additional wells is sufficient to define the impact to groundwater. If additional wells and/or sampling points are required, variations from this schedule will be required.
- Extreme weather will cause shifts in this schedule (snow, ice, rain, Acts of God etc.)



Section 4

Historical Reports and Manuals

The following is a summary of reports and manuals referenced as supplemental documents for implementation of this workplan:

HISTORICAL REPORTS

- NJDEP Administrative Consent Order (ACO) dated September 26, 1986
- NJDEP Superfund Record of Decision (ROD) dated April 1994
- Workplan for Phase I ROD Implementation dated October, 1994; Roy F. Weston, Inc.
- Quality Assurance Project Plan (QAPP) dated October, 1994; Roy F. Weston, Inc.
- Site Health and Safety Plan (HASP) dated October 1994; Roy F. Weston, Inc.
- Soil Erosion and Sediment Control Plan (SESCP); dated Oct 1994; Roy F. Weston, Inc.

SITE REFERENCE AND GUIDANCE MANUALS

- *NJDEP Field Sampling Procedures Manual* (1992)
- *Alternate Groundwater Sampling Techniques* (1994)
- *Technical Requirements for Site Remediation* (N.J.A.C 7:26E-2.1)



Section 5

Site Health and Safety

5.1 Minimum Requirements

All investigative and remedial activities related to this workplan must be performed in accordance with all federal, state, and local statutes, regulations, and ordinances. These include, but are not limited to, the standards contained in 29 CFR 1910 General Industry U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). A site specific Health and Safety Plan (HASP) and Hazard Assessment are presented as Appendix D and Appendix E respectively. A list of emergency points of contact specific to all scopes of work at the LEC site is presented as Appendix F.

Workers shall wear standard industrial protective gear including the following:

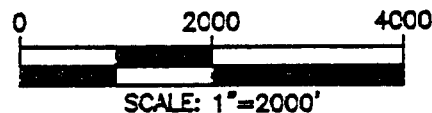
- Protective eyeglasses or goggles, as required
- Ear protection, as required
- Rubber gloves, as required
- Tyvek Suits, as required
- Steel Toed Boots, mandatory
- Hard Hats, mandatory

Most investigative and remedial activities should not lead to the direct contact or inhalation of extracted soil, groundwater or vapors. In general, avoid direct skin contact with groundwater water, decontamination water, and soils. Flush any skin contacted with groundwater, soils, decontamination water, and remove wetted clothing as soon as practicable.



QUADRANGLE LOCATION

SOURCE: BASE MAP FROM DOVER,
NEW JERSEY, 7.5 MINUTE USGS
QUADRANGLE, DATED 1981.



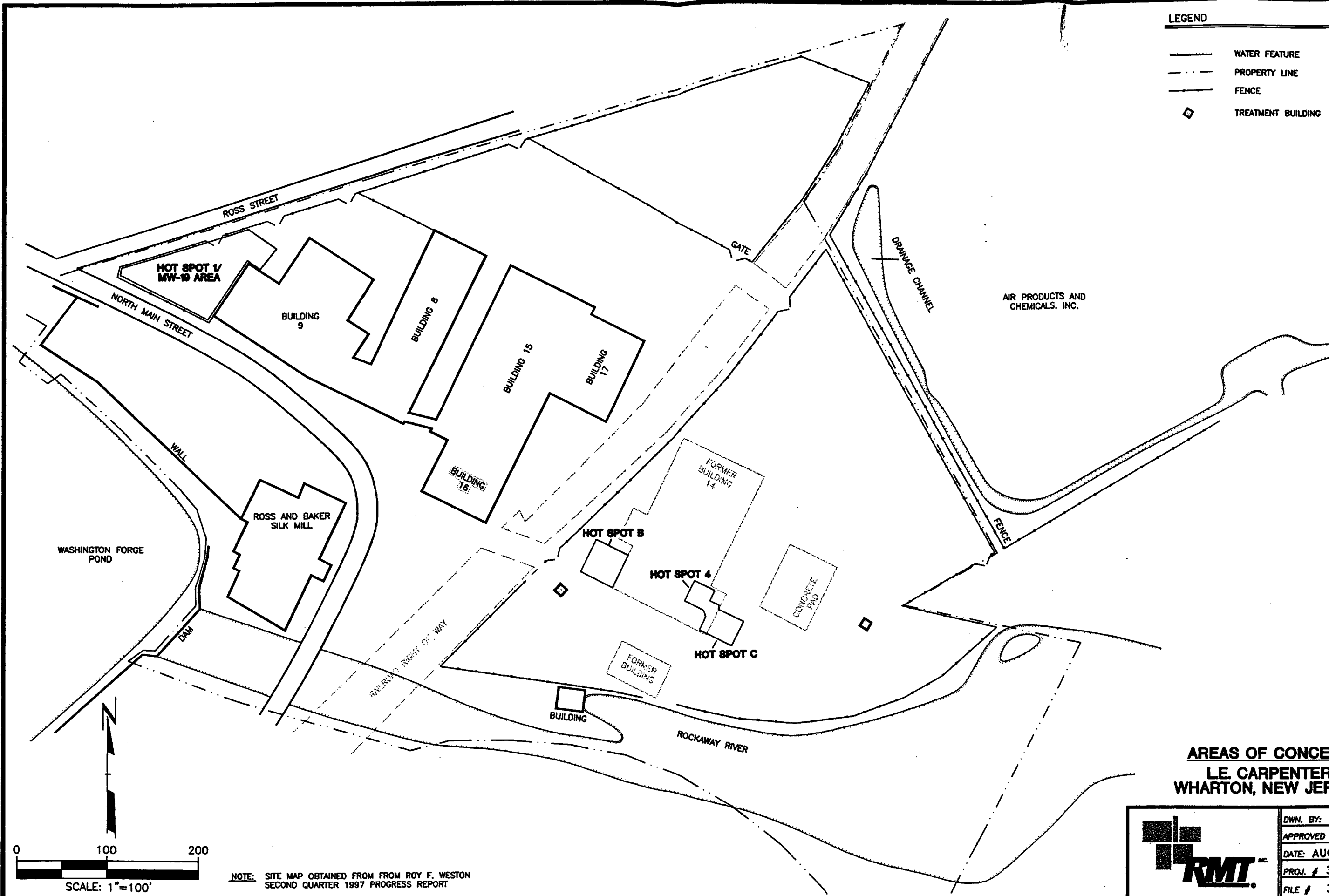
SITE LOCATOR MAP
LE CARPENTER
WHARTON, NEW JERSEY

RMT INC.

DWN. BY:	DFL
APPROVED BY:	
DATE:	APRIL 1998
PROJ. #	3868.02
FILE #	38680208

FIGURE 1

- LEGEND**
- WATER FEATURE
 - PROPERTY LINE
 - FENCE
 - ◻ TREATMENT BUILDING



**AREAS OF CONCERN
LE CARPENTER
WHARTON, NEW JERSEY**



DWN. BY: DFL
 APPROVED BY:
 DATE: AUGUST 1998
 PROJ. # 3868.02
 FILE # 38680238

NOTE: SITE MAP OBTAINED FROM FROM ROY F. WESTON
 SECOND QUARTER 1997 PROGRESS REPORT

PLOT DATA
 Drawing Name:
 Operator Name:
 Scale:
 Dwg Size:
 Plot Date:
 Plot Time:
 Attached Xref's:

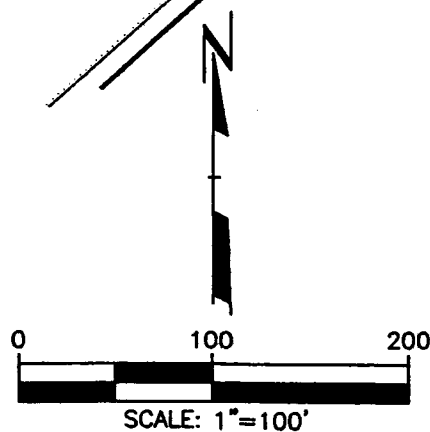
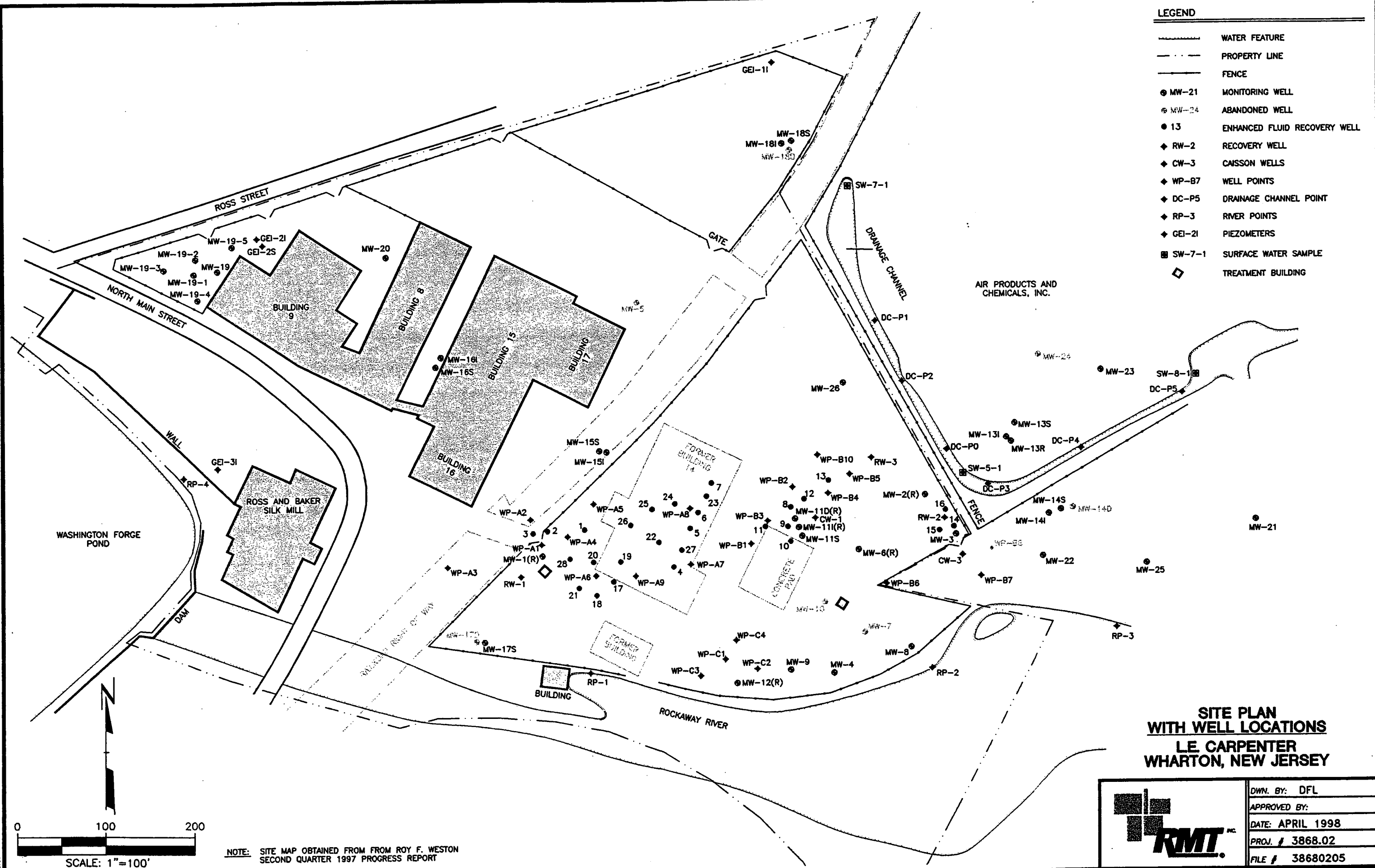


FIGURE 2

LEGEND

- WATER FEATURE
- PROPERTY LINE
- FENCE
- MW-21 MONITORING WELL
- MW-24 ABANDONED WELL
- 13 ENHANCED FLUID RECOVERY WELL
- ◆ RW-2 RECOVERY WELL
- ◆ CW-3 CAISSON WELLS
- ◆ WP-B7 WELL POINTS
- ◆ DC-P5 DRAINAGE CHANNEL POINT
- ◆ RP-3 RIVER POINTS
- ◆ GEI-21 PIEZOMETERS
- SW-7-1 SURFACE WATER SAMPLE
- ◇ TREATMENT BUILDING



SITE PLAN WITH WELL LOCATIONS LE CARPENTER WHARTON, NEW JERSEY

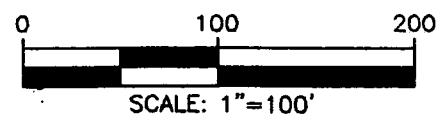


OWN. BY:	DFL
APPROVED BY:	
DATE:	APRIL 1998
PROJ. #	3868.02
FILE #	38680205

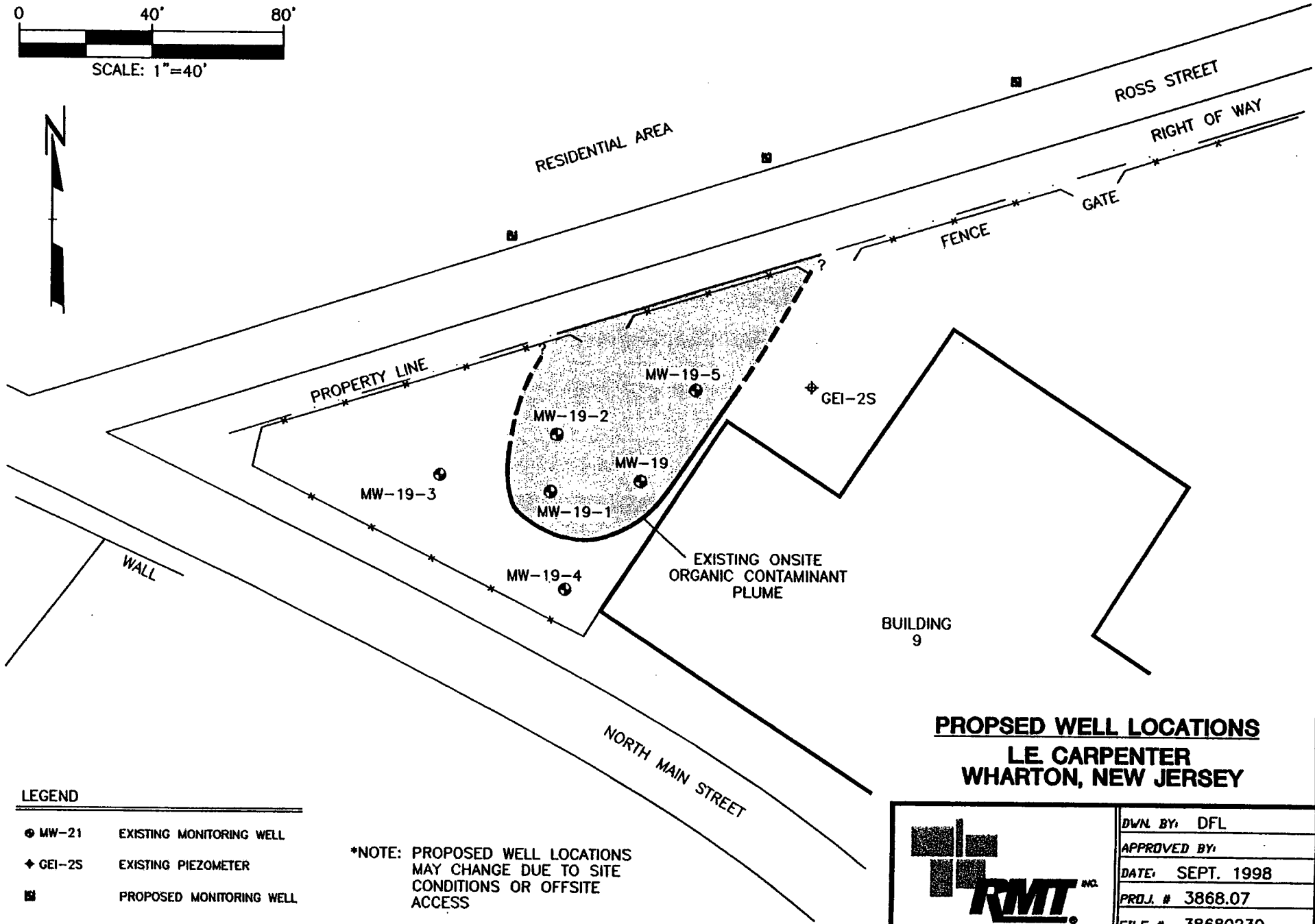
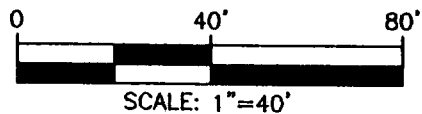
FIGURE 3

Dwg Size:
Plot Date:
Plot Time:
Attached Xref's:

Dwg Name:
Operator Name:
Scale:



NOTE: SITE MAP OBTAINED FROM FROM ROY F. WESTON
SECOND QUARTER 1997 PROGRESS REPORT



LEGEND

- MW-21 EXISTING MONITORING WELL
- ◆ GEI-2S EXISTING PIEZOMETER
- PROPOSED MONITORING WELL

*NOTE: PROPOSED WELL LOCATIONS
MAY CHANGE DUE TO SITE
CONDITIONS OR OFFSITE
ACCESS

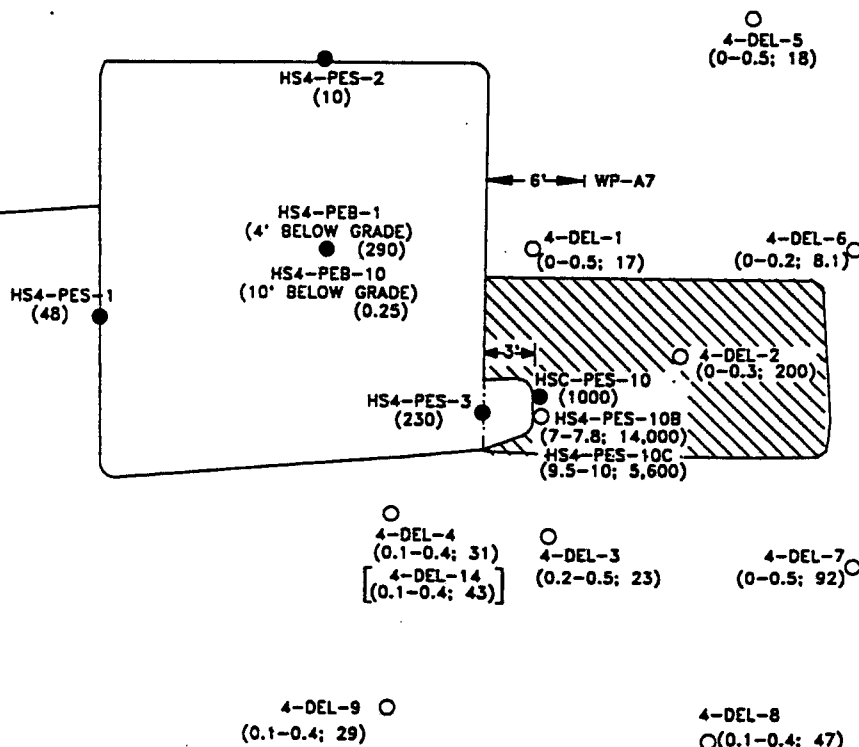
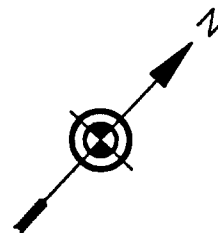
**PROPOSED WELL LOCATIONS
LE CARPENTER
WHARTON, NEW JERSEY**



DWN BY:	DFL
APPROVED BY:	
DATE:	SEPT. 1998
PROJ. #	3868.07
FILE #	38680230

FIGURE 1

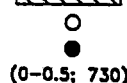
DIRT ROAD



LEGEND



APPROXIMATE AREA TO BE EXCAVATED



PROPOSED DELINEATION SAMPLE LOCATION
POST EXCAVATION SAMPLE LOCATION
SAMPLE DEPTH PRESENTED IN FEET,
AND CONCENTRATIONS PRESENTED IN
MILLIGRAMS PER KILOGRAM (MG/KG) OF
BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)

NOTE:

4-DEL-14 IS A DUPLICATE OF 4-DEL-4.



PROJECT NAME:

SECOND QUARTER 1996
PROGRESS REPORT

WHARTON,
CLIENT NAME:

NEW JERSEY

L.E. CARPENTER AND COMPANY

DELINEATION SAMPLE
LOCATIONS AND RESULTS
HOT SPOT 4

DATE:

JULY 1996

FIGURE 7:

2-9



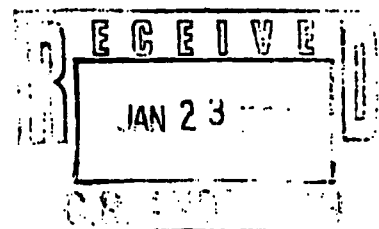
Appendix A

NJDEP Letters dated January 20, 1998; July 15, 1998 & October 13, 1998



State of New Jersey

Department of Environmental Protection

Christine Todd Whitman
GovernorRobert C. Shinn, Jr.
Commissioner

Mr. Cristopher Anderson
Director, Environmental Affairs
L.E. Carpenter & Company
200 Public Square
Suite 36-5000
Cleveland, OH 44114-2304

JAN 20 1998

Dear Mr. Anderson:

Re: L.E. Carpenter Superfund Site
Wharton, Morris County

The New Jersey Department of Environmental Protection (Department) and the U.S. Environmental Protection Agency (EPA) have reviewed the Second Quarter Progress Report dated August 1996. This document provided information regarding historical site information regarding the lead levels (Inorganic Hot Spots B and C) as well as information about Hot Spots 1 and 4 and the MW-19 area. Comments are presented below:

1. Inorganic Hot Spots B and C - The document states that the levels of lead in the soil that exist on site are a result of historical mining activities, and not attributable to L.E. Carpenter activities. While the Department and EPA believe that these lead levels in the soil may be at background concentrations that exist in this area, more information is needed. Therefore, it is requested that L.E. Carpenter obtain twenty samples from off-site locations and analyze them for lead in order that those results can be compared to the levels found on the L.E. Carpenter property. Twenty samples are required so that the results can be considered statistically significant.

Alternatively, L.E. Carpenter can develop a revised risk assessment to determine the risk associated with leaving the lead contaminated soils on site as well as a focused feasibility study that would address the soil capping alternative for the lead contaminated soils. In this case, the lead contaminated soils would only be allowed to be left on site if the risk posed is within the acceptable range of 10^{-4} to 10^{-6} and all soils over 600 ppm would be capped with a soil cover.

2. Hot Spot 1 - The argument that DEHP in soils at Hot Spot 1 is due to ground water smearing is very weak. DEHP is not fully delineated in this area, therefore, it is requested that additional well points be installed at B-1, B-3, and B-4 and analyzed for DEHP.
3. Hot Spot 4 - The recommendation for additional limited excavation is acceptable, however post-excavation samples are required on the southeast

side of the excavation unless the planned excavation is continued to points 4-DEL-3 and 4-DEL-7.

4. MW-19 Area - The proposed delineation plan for MW-19 area is acceptable.

Please feel free to contact me at (609) 633-7261 if you have any questions.

Sincerely,



Gwen Barunas, P.E.
Case Manager
Bureau of Federal Case Management

c: Stephen Cipot, USEPA
John Prendergast, BEERA
George Blyskun, BGWPA



State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

Mr. Cristopher Anderson
Director of Environmental Affairs
L.E. Carpenter & Company
Suite 36-5000
200 Public Square
Cleveland, OH 44114-2304

JUL 15 1998

Dear Mr. Anderson:

Re: L.E. Carpenter & Co. Superfund Site
Wharton Borough, Warren County

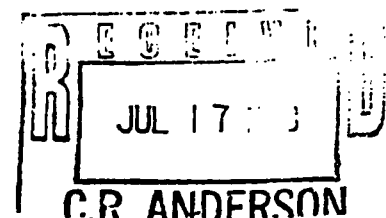
The New Jersey Department of Environmental Protection has reviewed the MW-19 and Hot Spot 1 Delineation Reports, prepared by Residuals Management Technology, Inc. dated June 1998 and has the following comments:

MW-19 Delineation

1. Based on the ground water data generated from the April 1998 sampling event, the down-gradient extent of volatile organic contamination has not been established. Although it appears that BTEX levels have decreased since the May 1996 sampling event, a clean zone must be established as per the Technical Requirements for Site Remediation, N.J.A.C. 7:26E-4.4. Additional permanent monitoring wells must be proposed by L.E. Carpenter to delineate the horizontal/down-gradient extent of ground water contamination in this area of concern.
2. As part of the MW-19 and Hot Spot 1 delineation, L.E. Carpenter installed four permanent ground water monitoring wells (MW-19-1 through MW-19-4) and one temporary ground water monitoring well (MW-19-5). Since MW-19-5 was a temporary monitoring well, it is assumed that MW-19-5 was properly abandoned according to the Department's well abandonment procedures.

Hot Spot 1 Delineation

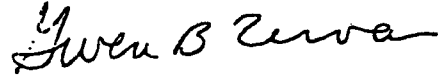
3. Results for MW-19-5 reported the presence of DEHP at 42 ug/L, which is above the Department's Ground Water Quality Standard of 30 ug/L. Based on these results, L.E. Carpenter has not determined the down-gradient extent of DEHP contamination in ground water. In addition, a soil sample that was collected at B-3 soil boring demonstrated a DEHP level of 790 ppm which may be a continuing source to ground water. L.E. Carpenter must conduct further delineation of DEHP in ground water at Hot Spot 1.



4. Please submit a schedule as to when this additional delineation will be conducted as well as the other issues discussed in the Department's January 20, 1998 letter, specifically items 1 and 3.

Please feel free to contact me at (609) 633-7261 if you have any questions.

Sincerely,



Gwen B. Zervas, P.E.
Case Manager
Bureau of Federal Case Management

C: George Blyskun, BGWPA
John Prendergast, BEERA



State of New Jersey

Christine Todd Whitman
Governor

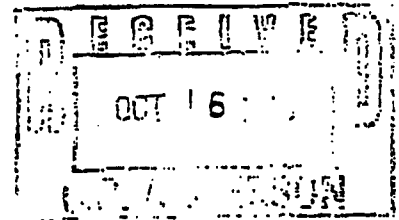
Department of Environmental Protection

Robert C. Skinn, Jr.
Commissioner

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
NO. P137639 584

Mr. Cristopher Anderson
Director, Environmental Affairs
L.E. Carpenter & Company
200 Public Square
Suite 36-5000
Cleveland, OH 44114-2304

OCT 13 1998



Dear Mr. Anderson:

Re: L.E. Carpenter Superfund Site
Wharton, Morris County

The New Jersey Department of Environmental Protection (Department) has reviewed the First Quarter 1998 Quarterly Progress Report and the drainage ditch surface water sampling results. The results of the drainage ditch surface water sampling showed that there were no site related impacts, therefore this document is approved as submitted. Comments on the progress report are as follows:

1. Section 3, Quarterly Monitoring - According to the report, routine ground water monitoring activities at the site were in accordance with the revised quarterly sampling program initiated during the second quarter 1995 sampling event. The approved Quarterly Monitoring Program required L.E. Carpenter to sample MW-17 biannually, and in addition to the BTEX analytical parameters, DEHP was to be included in sampling analysis every first and third quarter of each calendar year. Since recent quarterly sampling has not included the above, all subsequent rounds of ground water monitoring must fulfill these requirements.
2. L.E. Carpenter must explain the dramatic increase in BTEX levels at MW-22 (ethylbenzene at 4,070 ppb and total xylene at 20,600 ppb). The increase in BTEX contaminants at MW-22 suggests that the recovery system may not be effectively reducing the plume at the east perimeter.
3. Future reports must include a table that depicts a compilation of quarterly monitoring data for all quarters sampled so that increasing or decreasing trends can be easily visualized.

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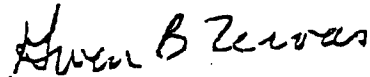
In addition, in the Department's January 20, 1998 letter comments were provided regarding Inorganic Hot Spots B and C and Hot Spot 4. Specifically, L.E. Carpenter was requested to obtain twenty soil samples from off-site locations and analyze them for lead in order to determine if the lead levels found on-site are at background concentrations. Alternatively, L.E. Carpenter could develop a revised risk assessment to determine the risk associated with leaving the lead contaminated soils on site, as well as a focused feasibility study that would address the soil capping alternative for the lead contaminated soils. Also, post excavation samples were requested on the southeast side of the Hot Spot 4 location unless the planned excavation is continued to points 4-DEL-3 and 4-DEL-7. To date, this work has not been conducted.

In the Department's July 15, 1998 letter comments were provided on the MW-19 and Hot Spot 1 Delineation Reports, which requested delineation of the ground water contamination in both areas of concern. The letter requested a schedule be provided for when this delineation work would be conducted as well as the work requested in the January 20, 1998 letter. To date, no work has been conducted and no schedule has been received.

Therefore, in accordance with Paragraph 30 of the Administrative Consent Order (ACO) dated September 26, 1986, the Department requests that a work plan be submitted within thirty (30) calendar days of the receipt of this letter for the additional work required as presented in the January 20, 1998 and July 15, 1998 letters. This work plan must contain a detailed schedule for all the work that is required. Failure to provide this work plan may result in the issuance of stipulated penalties as per Paragraph 40 of the ACO.

Please feel free to contact me at (609) 633-7261 if you have any questions.

Sincerely,



Gwen B. Zervas, P.E.

Case Manager

Bureau of Federal Case Management

C: Steven Cipot, USEPA
George Blyskun, BGWPA
John Prendergast, BEERA



Appendix B

Hot Spot 4 Analytical Results Summary for DEHP Impacted Soils (Roy F. Weston)

Table 2-8
Analytical Results Summary For Soils
DEHP (mg/kg)
L.E. Carpenter, Wharton, New Jersey
Hot Spot 4

Sample ID	Sample Date	Lab sample ID	Sample Depth	USCS Soil Type	Result	Qualifier
4-DEL-1	05/17/96	9605G319-002	0-0.5	FILL	14	E
4-DEL-1	05/17/96	9605G319-002	0-0.5	FILL	17	D
4-DEL-2	05/17/96	9605G319-001	0-0.3	FILL	60	E
4-DEL-2	05/17/96	9605G319-001	0-0.3	FILL	200	D
4-DEL-3	05/17/96	9605G319-005	0.2-0.5	FILL	15	E
4-DEL-3	05/17/96	9605G319-005	0.2-0.5	FILL	23	D
4-DEL-4	05/17/96	9605G319-003	0.1-0.4	FILL	31	E
4-DEL-4	05/17/96	9605G319-003	0.1-0.4	FILL	33	D
4-DEL-14	05/17/96	9605G319-004	0.1-0.4	FILL	31	E
4-DEL-14	05/17/96	9605G319-004	0.1-0.4	FILL	43	D
4-DEL-5	05/17/96	9605G320-022	0-0.5	FILL	12	E
4-DEL-5	05/17/96	9605G320-022	0-0.5	FILL	18	D
4-DEL-6	05/17/96	9605G320-021	0-0.2	FILL	6.1	E
4-DEL-6	05/17/96	9605G320-021	0-0.2	FILL	8.1	D
4-DEL-7	05/17/96	9605G320-016	0-0.5	FILL	34	E
4-DEL-7	05/17/96	9605G320-016	0-0.5	FILL	92	D
4-DEL-8	05/17/96	9605G320-017	0.1-0.4	FILL	18	E
4-DEL-8	05/17/96	9605G320-017	0.1-0.4	FILL	47	D
4-DEL-9	05/17/96	9605G320-020	0.1-0.4	FILL	15	E
4-DEL-9	05/17/96	9605G320-020	0.1-0.4	FILL	29	D
HS4-PES-10B	05/17/96	9605G320-019	7-7.8	SW	730	E
HS4-PES-10B	05/17/96	9605G320-019	7-7.8	SW	14000	D
HS4-PES-10C	05/17/96	9605G320-018	9.5-10	SW	370	E
HS4-PES-10C	05/17/96	9605G320-018	9.5-10	SW	5600	D
FB-07S*	05/17/96	9605G320-023	NA	NA	5	JB

Notes:

DEHP = bis(2-ethylhexyl)phthalate

E - Concentration exceeded the instrument calibration range and was subsequently diluted.

D - Compound analyzed at a dilution.

* - Field blank sample reported in micrograms per liter (ug/l).

mg/kg - milligrams per kilogram

- indicates an exceedance of the remedial goal of 100 mg/kg as specified in the ROD.

NA - Not Applicable

Sample depth presented is in feet below grade.

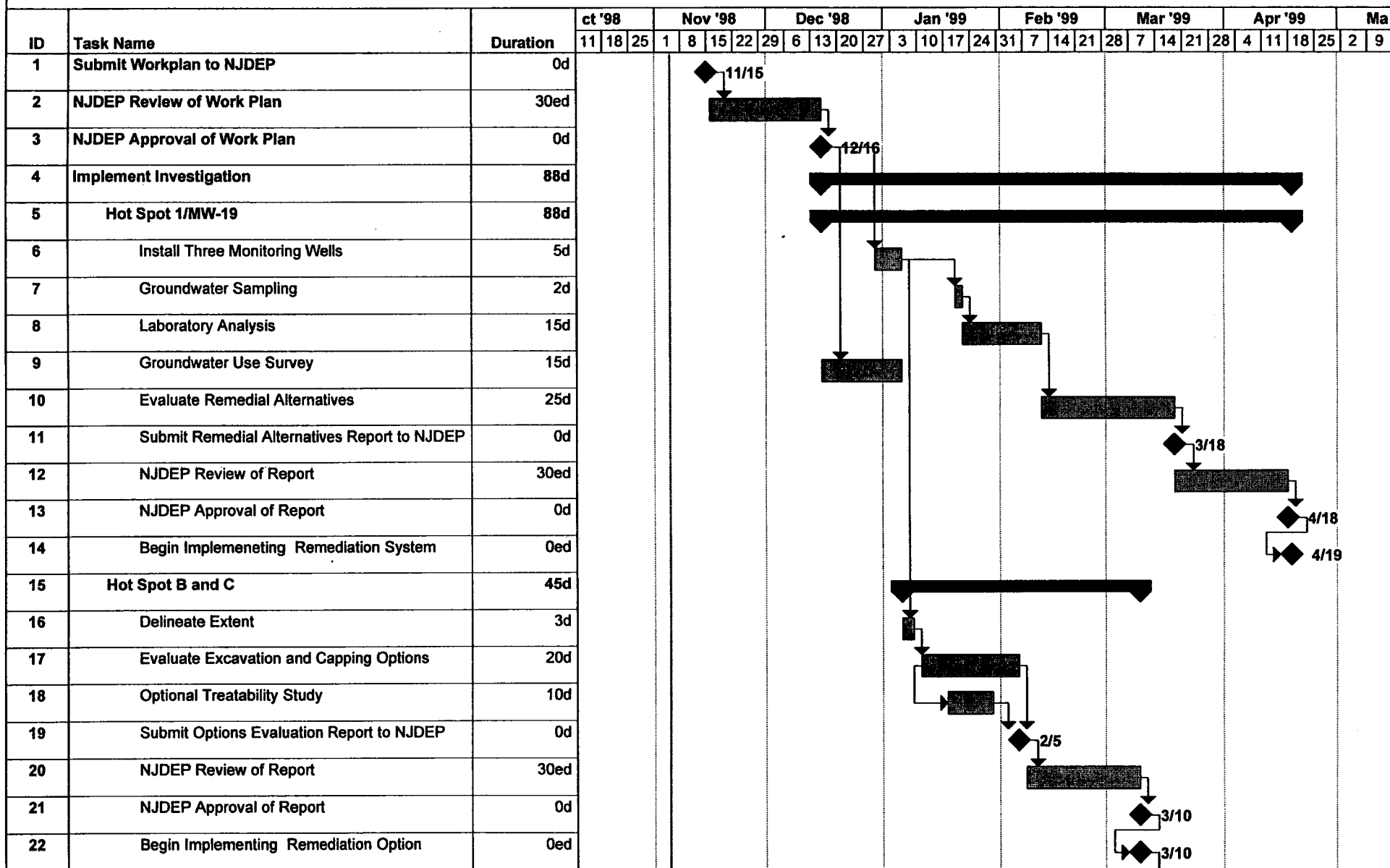
4-DEL-14 is a duplicate sample of 4-DEL-4.



Appendix C

Workplan Schedule

Figure 1
Project Schedule
L.E. Carpenter



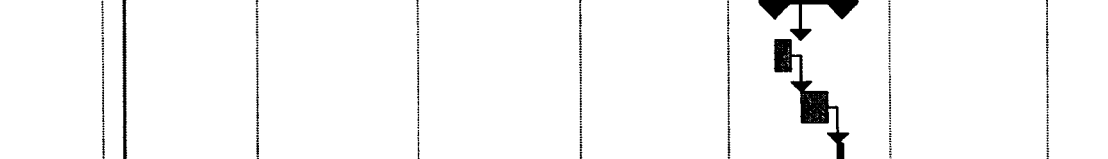
Project: LE Carpenter Investigation/R
 Date: 11/5/98

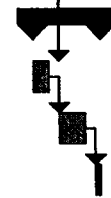
Task

Milestone

Summary

Figure 1
Project Schedule
L.E. Carpenter

ID	Task Name	Duration	ct '98			Nov '98				Dec '98				Jan '99				Feb '99				Mar '99				Apr '99					Ma	
			11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	31	7	14	21	28	7	14	21	28	4	11	18	25	2
23	Hot Spot 4	9d																														
24	Excavate Soils	3d																														
25	Characterize Soils	5d																														
26	Dispose Soils	1d																														



Project: LE Carpenter Investigation/R
Date: 11/5/98

Task



Milestone



Summary





Appendix D

Health and Safety Plan

Site Health & Safety Plan

1. General Information

Project:	L.E. Carpenter Company	Project Number:	Various
Site Location:	Wharton, New Jersey	Project Manager:	Alan J. Schmidt
Prepared By:	Nicholas J. Clevett	Date:	November 5, 1998
Approved By:	_____ (PM)	_____ (HSC)	
	Alan J. Schmidt	Daniel Leskovec	
Date:	_____	_____	

TEAM MEMBER	RESPONSIBILITIES
Daniel Leskovec	RMT Site Health and Safety Representative
Nick Clevett	Technical Manager
Al Schmidt	Project Manager

2. Training and Medical Surveillance

Training Level Required:

- ☒ HAZWOPER 40/8 hour, First Aid, CPR (for all Type 3 sites)
- ☐ Specialty (e.g., confined space, lockout/tagout)

List:

Medical Surveillance Level Required:

- ☒ HAZWOPER physical
- ☐ Special medical tests

List:

Exceptions/Modifications to training or medical surveillance required: None

3. Personal Protection

Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work areas or tasks:

LOCATION	JOB FUNCTION	LEVEL OF PROTECTION			
MW/19 Hot Spot 1	Monitoring Well Installation Oversight	<input checked="" type="checkbox"/> D	<input type="checkbox"/> C	<input type="checkbox"/> B	<input type="checkbox"/> A
Hot Spot B&C	Soils Investigation	<input checked="" type="checkbox"/> D	<input type="checkbox"/> C	<input type="checkbox"/> B	<input type="checkbox"/> A
Hot Spot 4	Soils Excavation, Sampling and Disposal	<input checked="" type="checkbox"/> D	<input type="checkbox"/> C	<input type="checkbox"/> B	<input type="checkbox"/> A
		<input type="checkbox"/> D	<input type="checkbox"/> C	<input type="checkbox"/> B	<input type="checkbox"/> A

Specific protective equipment for each level are as follows: ⁽¹⁾

Level A Respiratory: <input type="checkbox"/> SCBA <input type="checkbox"/> Air-Line Supplied Air Respirator <input type="checkbox"/> Other (describe)	Level B Respiratory: <input type="checkbox"/> SCBA <input type="checkbox"/> Air-Line Supplied Air Respirator <input type="checkbox"/> Other - Level C-D plus the following exceptions/modifications -
Level C Respiratory - Air-purifying respirator with cartridge/canister type: <input type="checkbox"/> HEPA, acid gas, organic vapors (e.g., MSA GMC-H) <input type="checkbox"/> HEPA only <input type="checkbox"/> Other - Level D plus the following exceptions/modifications -	Level D Respiratory - None Other: <input checked="" type="checkbox"/> Safety glasses <input checked="" type="checkbox"/> Hard hat <input checked="" type="checkbox"/> Safety shoes <input checked="" type="checkbox"/> Ear plugs/muffs <input type="checkbox"/> Snake chaps/Gaiters <input checked="" type="checkbox"/> Protective clothing and/or gloves required (i.e., modified Level D) <input type="checkbox"/> Other (describe)
Other skin, eyes, and fall protection required: <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> Gloves: <input type="checkbox"/> Butyl rubber <input type="checkbox"/> PVC-coated <input checked="" type="checkbox"/> Neoprene <input type="checkbox"/> Nitrile <input type="checkbox"/> Other (describe) </div> <div style="width: 48%;"> Protective clothing: <input checked="" type="checkbox"/> Tyvek® or equivalent <input type="checkbox"/> Tyvek® polyethylene-coated or equivalent <input type="checkbox"/> Tyvek® Saranex® or equivalent <input type="checkbox"/> Other (describe) </div> </div>	

⁽¹⁾ See RMT Health and Safety Manual for minimum criteria.

Criteria for changing protection levels are as follows:

CHANGE	APPROVALS REQUIRED ⁽¹⁾		
	HSR	HSC	CHSD
To Level C when Ambient concentrations spikes for COCs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To Level when	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To Level when	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To Level when	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evacuate the area when:			

- (1) HSR: On-site Health & Safety Representative
HSC: Regional Health & Safety Coordinator
CHSD: Corporate Health & Safety Director

Changes to the level of protection shall be made after the required approvals are obtained. All changes shall be recorded in the field log and reported to the HSC as soon as possible.

4. Air Monitoring

The following monitoring instruments shall be used on-site to measure airborne contaminant concentrations in the breathing zone:

	FREQUENCY OF MONITORING
<input checked="" type="checkbox"/> Combustible Gas Indicator	During excavations
<input type="checkbox"/> O ₂ Monitor	
<input type="checkbox"/> Colorimetric Tubes (type)	
<input checked="" type="checkbox"/> PID	Sample field screening, as deemed necessary by HSR
<input type="checkbox"/> FID	
<input type="checkbox"/> Other (specify)	

5. Site Control (Describe or attach sketch)

Work Zones:

Support Zone: Minimum of 50 ft from activity areas

Contamination Reduction Zone (area used for decontamination): 30 feet from activity area

Exclusion Zone (area considered contaminated): At well installation location or excavations

Site Entry Procedures:

- ☒ Notify Site Health and Safety Representative
- ☒ Read Health & Safety Plan and sign Acknowledgment Statement
- ☐ Check in with facility security guard
- ☒ Wear proper personal protective equipment
- ☐ Attend facility orientation
- ☒ Conduct "Toolbox" safety meeting
- ☐ Other (specify):

Decontamination Procedures:

Personnel: As required (dispose of PPE)

Equipment: Prior to and After use; In between sampling

Investigation - Derived Material Disposal:

- ☒ *Leave on site for disposal.*
- ☐ *Other (describe)*

Work Limitations (time of day, buddy system, etc.): Daylight hours only, buddy system

6. Contingency Planning

LOCAL EMERGENCY RESOURCES	
Ambulance:	911
Hospital Emergency Room:	911
Poison Control Center	Alabama (800) 462-0800
Police:	911
Fire Department:	911
USEPA Contact:	
Other:	

SITE RESOURCES:		
Water Supply:		
Telephone:		
Radio:		
Other:		
EMERGENCY CONTACTS:		
RMT Technical Contact:	Nicholas Clevett	(847) 995-1500
RMT Project Manager	Al Schmidt	(847) 995-1500
RMT Health & Safety Coordinator:	Daniel Leskovec	At the site
RMT Health & Safety Director	Steve Skipper	(work) (864) 281-0030 (home) (864) 268-2912 (EMERGENCY beeper only) 888-576-1899
Contractor Office Contact:		
Field Contact:		
Client Contact:	Cris Anderson	
Facility Manager:		

Emergency Routes (give directions or attach map):

Hospital:

Other:

Emergency Procedures:

If an emergency develops at the site, the discoverer will take the following course of action:

- Notify the proper emergency services (fire, police, ambulance, etc.) for assistance.
- Notify other affected personnel at the site.
- Contact RMT and the client representative to inform them of the incident as soon as possible.
- Prepare a summary report of the incident for RMT and the client representative.

Emergency Equipment Required On-site:

- | | |
|--|--|
| <input checked="" type="checkbox"/> First Aid/Bloodborne Pathogens Kit | <input type="checkbox"/> Fire Extinguisher |
| <input type="checkbox"/> Eye Wash | <input type="checkbox"/> Spill Control Media |
| <input type="checkbox"/> Shower | <input type="checkbox"/> Other: (describe) |
| <input type="checkbox"/> Other: (describe) | <input type="checkbox"/> Other: (describe) |

Acknowledgment Statement:

As an employee of RMT, Inc., I have reviewed the Hazard Assessment and Site Health & Safety Plan. I hereby acknowledge that I have received the required level of training and medical surveillance, that I am knowledgeable about the contents of this site-specific Health & Safety Plan, and that I will use personal protective equipment and follow procedures specified in the Health & Safety Plan.

Signatures of RMT Site Personnel (Required):



Appendix E

Hazard Assessment

Hazard Assessment

1. General Information

Project:	L.E. Carpenter Company	Project Number:	Various
Site Location:	Wharton, New Jersey	Project Manager:	Alan J. Schmidt
Prepared By:	Nicholas J. Clevett	Date:	November 5, 1998
Approved By:	_____ (PM)	_____ (HSC)	
	Alan J. Schmidt	Daniel Leskovec	
Date:	_____	_____	

Proposed Scope of Work and Specific Tasks: Monitoring Well installations (MW-19/Hot Spot 1 Area); Hot Spot B&C Soil Investigation (full delineation); Hot Spot 4 Soils Excavation, Accumulation, Characterization, Treatment and Disposal.

RMT Role On-site:

- ☐ Resident Project Representative (e.g., "Observe and Document")
- ☐ Construction Manager (e.g., General Contractor)
- ☒ Managing Contractor (e.g., "Agent for Owner")
- ☐ Other (describe)

Proposed Dates of On-site Work: January 1999 - March 1999

Background Information Review: ☐ Preliminary ☐ Moderate ☒ Substantial

Documentation/Summary Overall Hazard: ☐ Serious ☒ Moderate
☐ Low ☐ Unknown

2. Site Characterization

Facility Description: Site is currently regulated under CERCLA as a Superfund Clean-up. Most buildings, to date, have been demolished. The site undergoes monthly enhanced fluid recovery to extract free phase product from the surface of the water table, in addition to quarterly groundwater monitoring. Currently, the site is undergoing further Phase II subsurface investigations to fully delineate impact to groundwater and native soils (MW-19/Hot Spot 1 & Hot Spots B&C). Certain areas have received closure from the NJDEP as areas of concern. One area (Hot Spot 4) is scheduled for excavation, to remove residue impacted soils contaminated with lead above site clean-up levels (600 mg/kg).

Status: ☐ Active ☒ Inactive ☐ Unknown

Operations (current and past): When active (1943 - 1987) the site operated as a manufacturing facility for vinyl wall coverings. Portions of the site are currently subleased as warehouse space.

Unusual Features (utilities, terrain, etc.): The site has undergone extensive demolition, east of the rail spur. As a result, site topography has been altered. The site is bounded by the Rockaway River (South), Washington Forge Pond (West), a drainage ditch (East), and Ross St (North).

History (worker or nonworker injury, complaints from public, previous agency action): Regulated Superfund Site. No knowledge of previous worker injuries is readily available.

3. Site Classification:

Site Type Allocated: ☒ 1 Known or controlled hazards ☐ 2 Unknown and/or uncontrolled hazards ☒ 3 Regulated by 29 CFR 1910.120

Comments: Extensive site investigation has identified all contaminants of concern in both the soil and liquid site matrix.

4. Hazard Evaluation

Potential Chemical Hazards:

SUBSTANCE NAME ⁽¹⁾	PHYSICAL STATE	KNOWN CONCENTRATION LEVELS PRESENT ⁽²⁾	POTENTIAL ROUTES OF EXPOSURE	1997 ACGIH TLV	OSHA PEL
Toluene	Liquid	123 ppm	Inh, Abs, Ing, Con		100 ppm
Total Xylenes	Liquid	11 ppm	Inh, Abs, Ing, Con		100 ppm
Ethylbenzene	Liquid	1.88 ppm	Inh, Ing, Con		100 ppm
Lead	Solid	5,404 ppm	Inh, Ing, Con		0.1 mg/m ³
bis (2-Ethylhexyl) Phthalate (DEHP)	Liquid Solid	14 ppm 14,000 ppm	Inh, Ing, Con		Unknown

(1) Attach MSDS if available.

(2) Attach laboratory results or tables if available.

Above concentrations are representative of the highest, most recent site concentrations of each parameter

Ionizing Radiation:**Radioactive materials used on-site, past or present:**☐ Yes (complete table below)☒ No**Possibility of contamination or exposure due to past or present use of radioactive materials:**☐ Yes (complete table below)☒ No

SOURCE	QUANTITY	PHYSICAL STATE	POTENTIAL OF EXPOSURE	CONTROL MEASURE

If the answers to the above questions are both NO, this table will remain blank.

Physical Safety Hazards On-Site and Control Measures

HAZARD	CONTROL MEASURE
Noise	Ear plugs
Heat Stress	Work Rest regime, hydration
Cold Stress	Work Rest regime, first aid/CPR, PPE
Excavations	Side wall shoring, monitoring, oversight
Utilities	Utility location prior to intrinsic subsurface activity



Appendix F

Emergency Points of Contact

L.E. Carpenter Company
170 North Main Street
Wharton, New Jersey

EMERGENCY NOTIFICATION

IN CASE OF AN EMERGENCY, PLEASE CONTACT THE FOLLOWING PARTIES

- ♦ **RMT, Inc.**, 999 Plaza Dr., Suite 370, Schaumburg, IL 60173
Function: Environmental Project Management and Engineering
Project Technical Manager: Mr. Nicholas J. Clevett
Project Manager: Mr. Alan J. Schmidt
(847) 995-1500 Phone
(847) 995-1900 Fax

- ♦ **L.E. Carpenter Company**., 200 Public Square, Suite 36-5000, Cleveland, OH 44114-2304
Function: Client
Point of Contact: Mr. Cris Anderson
Position: Director of Environmental Affairs
(216) 589-4020 Phone
(216) 589-4034 Fax

- ♦ **New Jersey Department of Environmental Protection (NJDEP)**
Function: Regulator
Point of Contact: Mrs. Gwen Zervas, Case Manager
(609) 633-7261 Phone

- ♦ **United States Environmental Protection Agency: USEPA Region II**
Function: Regulator
Site Contact: Mr. Steven Cipot, Case Manager
(212) 637-4411 Phone

